

Appendix G2: Noncarcinogenic Risk Estimate for Children
General Public and Native American Population

Anadromous Fish: Pacific lamprey
 Fillet with skin and whole body samples

Chemical Group	Chemical	Sample Type	Hazard Quotient				Site	Waterbody
			AFC	HFC	AFC	HFC		
Aroclors	Aroclor 1254	FS	0.41	11	7.2	47	21	Willamette River
Aroclors	Total Aroclors	FS	0.41	11	7.2	47	21	Willamette River
Pesticides	Chlordane (total)	FS	0.0081	0.22	0.14	0.93	21	Willamette River
Pesticides	Total DDT	FS	0.018	0.49	0.31	2.0	21	Willamette River
Pesticides	Hexachlorobenzene	FS	0.00090	0.025	0.016	0.10	21	Willamette River
Metals	Arsenic	FS	0.0099	0.27	0.17	1.1	21	Willamette River
Metals	Cadmium	FS	0.0022	0.061	0.039	0.26	21	Willamette River
Metals	Chromium	FS	0.0025	0.069	0.044	0.29	21	Willamette River
Metals	Cobalt	FS	0.000052	0.0014	0.00091	0.0059	21	Willamette River
Metals	Copper	FS	0.0031	0.084	0.054	0.35	21	Willamette River
Metals	Manganese	FS	0.00026	0.0070	0.0045	0.029	21	Willamette River
Metals	Selenium	FS	0.0081	0.22	0.14	0.93	21	Willamette River
Metals	Vanadium	FS	0.00013	0.0036	0.0023	0.015	21	Willamette River
Metals	Zinc	FS	0.0064	0.18	0.11	0.73	21	Willamette River
Aroclors	Aroclor 1254	WB	0.35	9.5	6.1	40	21	Willamette River
Aroclors	Aroclor 1254	WB	0.61	17	11	70	24	Fifteen Mile Ck
Aroclors	Total Aroclors	WB	0.40	11	7.0	46	21	Willamette River
Aroclors	Total Aroclors	WB	0.61	17	11	70	24	Fifteen Mile Ck
Pesticides	Chlordane (total)	WB	0.0039	0.11	0.068	0.45	21	Willamette River
Pesticides	Chlordane (total)	WB	0.010	0.28	0.18	1.2	24	Fifteen Mile Ck
Pesticides	Total DDT	WB	0.013	0.37	0.24	1.5	21	Willamette River
Pesticides	Total DDT	WB	0.023	0.64	0.40	2.6	24	Fifteen Mile Ck
Pesticides	Hexachlorobenzene	WB	0.00050	0.014	0.0088	0.057	21	Willamette River
Pesticides	Hexachlorobenzene	WB	0.0012	0.033	0.021	0.14	24	Fifteen Mile Ck
Semivolatiles	Fluoranthene	WB	0.000028	0.00077	0.00049	0.0032	24	Fifteen Mile Ck
Metals	Aluminum	WB	0.00012	0.0033	0.0021	0.014	21	Willamette River
Metals	Aluminum	WB	0.00010	0.0028	0.0018	0.012	24	Fifteen Mile Ck
Metals	Arsenic	WB	0.0098	0.27	0.17	1.1	21	Willamette River
Metals	Arsenic	WB	0.0050	0.14	0.088	0.58	24	Fifteen Mile Ck
Metals	Cadmium	WB	0.013	0.35	0.23	1.5	21	Willamette River
Metals	Cadmium	WB	0.0062	0.17	0.11	0.71	24	Fifteen Mile Ck
Metals	Chromium	WB	0.0031	0.085	0.054	0.35	21	Willamette River
Metals	Chromium	WB	0.0034	0.092	0.059	0.38	24	Fifteen Mile Ck
Metals	Cobalt	WB	0.00017	0.0046	0.0029	0.019	21	Willamette River
Metals	Cobalt	WB	0.00012	0.0032	0.0021	0.014	24	Fifteen Mile Ck
Metals	Copper	WB	0.011	0.30	0.19	1.3	21	Willamette River
Metals	Copper	WB	0.013	0.35	0.22	1.5	24	Fifteen Mile Ck
Metals	Manganese	WB	0.00031	0.0085	0.0054	0.035	21	Willamette River
Metals	Manganese	WB	0.00017	0.0047	0.0030	0.020	24	Fifteen Mile Ck
Metals	Mercury	WB	0.081	2.2	1.4	9.3	21	Willamette River
Metals	Mercury	WB	0.17	4.6	2.9	19	24	Fifteen Mile Ck
Metals	Nickel	WB	0.000083	0.0023	0.0015	0.0095	21	Willamette River
Metals	Nickel	WB	0.0013	0.037	0.023	0.15	24	Fifteen Mile Ck
Metals	Selenium	WB	0.011	0.31	0.20	1.3	21	Willamette River
Metals	Selenium	WB	0.010	0.29	0.18	1.2	24	Fifteen Mile Ck
Metals	Vanadium	WB	0.00053	0.014	0.0092	0.060	21	Willamette River
Metals	Vanadium	WB	0.00058	0.016	0.010	0.067	24	Fifteen Mile Ck
Metals	Zinc	WB	0.0067	0.19	0.12	0.77	21	Willamette River
Metals	Zinc	WB	0.0069	0.19	0.12	0.79	24	Fifteen Mile Ck

NOTE:

FS - fillet with skin AFC - average fish consumption
 WB - whole body HFC - high fish consumption

Risk for General Public:

AFC - risk based on mean U.S. per capita consumption rate of uncooked freshwater and estuarine fish, 2.83 g/day (5 meals/yr) (USEPA 2000a)

HFC - risk based on 99th percentile U.S. per capita consumption rate of uncooked freshwater and estuarine fish, 77.95 g/day (11 meals/yr) (USEPA 2000a)

Risk for Native American:

AFC - risk based on mean consumption rate for fish consumers in the Umatilla, Nez Perce, Yakama, and Warm Springs Tribes of the Columbia River Basin,
 24.8 g/day (40 meals/yr) (CRITFC 1994)

HFC - risk based on 99th percentile consumption rate for fish consumers in the Umatilla, Nez Perce, Yakama, and Warm Springs Tribes of the Columbia River Basin,
 162 g/day (5 meals/wk) (CRITFC 1994)

Chlordane (total) - sum of cis-chlordane, cis-nonachlor, gamma-chlordane, oxychlordane, and trans-nonachlor

Total Aroclors - based on Aroclor 1254 in FS and sum of Aroclors 1254 and 1260 in WB; risk calculated using RfD for Aroclor 1254

Total DDT - sum of o,p' and p,p' isomers of DDT and its derivatives (DDD and DDE); risk calculated using RfD for DDT